Claims

1. A device to improve the comfort and ocular health of a dry eye syndrome subject and to reduce the harmful effect of dry eye syndrome on the eye and adnexa, the device comprising:

an at least partially enclosed chamber adapted to fit closely to an area surrounding the eye of the dry eye syndrome subject, and thereby to create a local atmospheric microenvironment in the vicinity of at least one eye of the dry eye syndrome subject;

the chamber comprising a substantially optically transparent portion supported beneath a substantially opaque brim structure; and

a reservoir adapted to contain a material subject to vaporization, the reservoir being adapted to release the material in a vaporized state into the local atmospheric microenvironment so as to expose the eye to the vaporized material to ameliorate the negative effects of the dry eye syndrome.

- 2. The device as claimed in claim 1, in which the reservoir comprises an absorbent layer.
- 3. The device as claimed in claim 1, in which the reservoir comprises a first absorbent layer and a second layer having wicking and anti-microorganism properties.

- 4. The device as claimed in claim 1, in which the reservoir comprises super absorbent particles.
- 5. The device as claimed in claim 1, in which the reservoir comprises a jellified water product.
- 6. The device as claimed in claim 6, in which the reservoir is supplied dry and moistened at the time of desired use.
- 7. The device as claimed in claim 1, in which the reservoir is supplied in a premoistened state in a sealed package.
- 8. The device as claimed in claim 1, in which the reservoir is moistened with a liquid selected from a group consisting of water, purified water, Ringer's solution and a buffered formulation of an appropriate ionic and electrolytic composition to mimic human tears.
- 9. The device as claimed in claim 1, in which the enclosed chamber is substantially sealed to the face of the dry eye syndrome subject to contain the microenvironment.

- 10. The device as claimed in claim 1, in which the enclosed chamber further comprises a conforming seal adapted to substantially seal to the face of the dry eye syndrome patient.
- 11. The device as claimed in claim 1, in which the reservoir is removably attachable within the enclosed chamber.
- 12. The device as claimed in claim 1, in which the enclosed chamber further comprises a hat supporting the brim.
- 13. The device as claimed in claim 1, in which the optically transparent portion comprises a first edge suspended from the brim and enclosing the face, and a second edge closely approximating the face and the reservoir being removably attachable within the enclosure.
- 14. The device as claimed in claim 1, in which the reservoir is supplied dry along with a premeasured quantity of the material subject to vaporization and the material subject to vaporization is applied to the reservoir at the time of desired use.
- 15. The device as claimed in claim 1, in which a humidity level achieved within the microenvironment exceeds 90% relative humidity.

- 16. The device as claimed in claim 1, in which a humidity level achieved within the microenvironment exceeds 90% relative humidity and is maintained for in excess of 6 hours.
- 17. A method for ameliorating the effects of dry eye syndrome on eyes, the method comprising the steps of:

substantially enclosing the eyes and adnexa in a chamber adapted to fit closely to a face of a dry eye syndrome patient thereby creating a local atmospheric microenvironment in the vicinity surrounding an eye the chamber comprising a substantially optically transparent portion supported beneath a substantially opaque brim structure;

placing within the chamber a reservoir adapted to contain a material subject to vaporization, the reservoir being adapted to release the material in a vaporized state into the local atmospheric microenvironment; and

thereby, maintaining within the local atmospheric microenvironment, an atmosphere rich in a vaporized substance that provides beneficial effect to the eyes.

- 18. The method as claimed in claim 17, further comprising the step of removably attaching the reservoir within the microenvironment.
- 19. The method as claimed in claim 17, further comprising the step of covering the reservoir with a permeable layer having anti-microorganism properties.

- 20. The method as claimed in claim 17, further comprising the steps of encapsulating the reservoir in an impermeable package in a premoistened state and opening the impermeable package when it is desired to use the reservoir.
- 21. The method as claimed in claim 17, further comprising the step of moistening the reservoir with a liquid selected from a group consisting of water, purified water, Ringer's solution and a buffered formulation of an appropriate ionic and electrolytic composition to mimic human tears.
- 22. The method as claimed in claim 17, further comprising the step of substantially sealing the chamber to the face with a conforming seal.
- 23. The method as claimed in claim 17, further comprising the step of adapting the chamber to be incorporated into a hat.
- 24. The method as claimed in claim 17, in which the in which a humidity level achieved within the microenvironment exceeds 90% relative humidity.
- 25. The method as claimed in claim 17, in which a humidity level achieved within the microenvironment exceeds 90% relative humidity and is maintained for in excess of 6 hours.

A device to improve the comfort of a dry eye syndrome patient and to reduce the harmful effect of dry eye syndrome on the eye and adnexa, the device comprising:

optically transparent means for substantially enclosing and fitting closely to an area surrounding the eye of the dry eye syndrome patient thereby creating a local atmospheric microenvironment in the vicinity of at least one eye of the dry eye syndrome patient;

means for shading the eyes from light from above and

means for containing a material subject to vaporization, the material containing means being adapted to release the material in a vaporized state into the local atmospheric microenvironment so as to expose the eye and adnexa to the vaporized material to ameliorate the negative effects of the dry eye syndrome.

- 27. The device as claimed in claim 26, in which the means for containing is removably attachable within the means for enclosing and fitting closely.
- 28. The device as claimed in claim 26, in which the means for containing comprises an absorbent layer.
- 29. The device as claimed in claim 26, in which the means for containing comprises a first absorbent layer and a second layer having wicking and anti-microorganism properties.

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- 30. The device as claimed in claim 26, in which the means for containing comprises super absorbent particles.
- 31. The device as claimed in claim 26, in which the means for containing comprises a jellified water product.
- 32. The device as claimed in claim 26, in which the means for containing is supplied dry and moistened at the time of desired use.
- 33. The device as claimed in claim 26, in which the means for containing is supplied in a premoistened state in a sealed package.
- The device as claimed in claim 26, in which the means for containing is moistened with a liquid selected from a group consisting of water, purified water, Ringer's solution and a buffered formulation of an appropriate ionic and electrolytic composition to mimic human tears.
- 35. The device as claimed in claim 26, in which the means for enclosing is substantially sealed to the face of the dry eye syndrome patient to contain the microenvironment.

- 36. The device as claimed in claim 46, in which the means for enclosing further comprises a conforming seal adapted to substantially seal to the face of the dry eye syndrome patient.
- 37. The device as claimed in claim 46, in which the means for enclosing further comprises a hat.